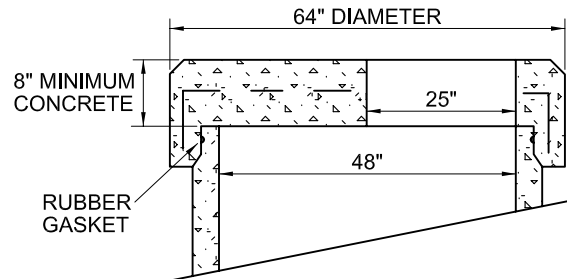


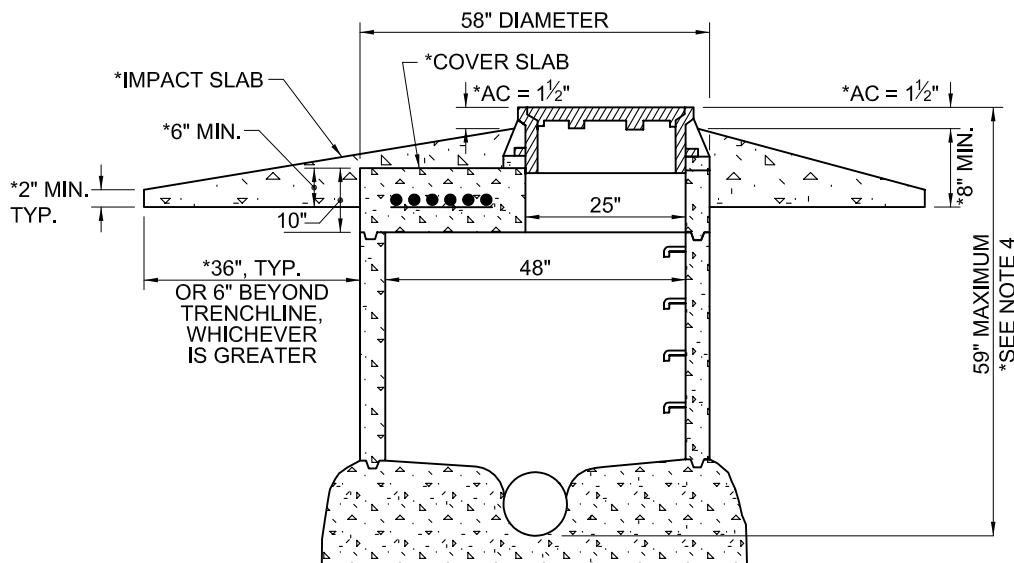
NOTES:

1. All joints and rubber gaskets shall conform to the requirements of ASTM C-433.
2. All manhole sections shall conform to the requirements of ASTM C-478 and applicable provisions of *Beaverton Standard Dwg 304*.
3. Steps required on flat top manholes deeper than 48-inches.
4. * When depth of manhole is less than 4 feet, make hole for frame and cover in center of cover slab. Provide cover slab reinforcing design for all applications. Submit design to the City for review.
5. * Impact slab required when cover slab protrudes into road base material. Provide impact slab reinforcing design. Submit design to the City for review.
6. * Provide cover slab reinforcing design for all applications. Submit design to the City for review.
7. * The City reserves the right to deviate from this drawing and related requirements in the *Engineering Design Manual* as dictated by project design parameters, and as approved by the City Engineer.



RUBBER GASKET FLAT TOP (OPTIONAL)

* INDICATES MODIFICATIONS FROM CWS



FLAT TOP MANHOLE

CWS (USA) STANDARD DETAIL NO. 050
MODIFIED BY BEAVERTON ORDINANCE #4303



City Of Beaverton

ENGINEERING
DEPARTMENT

CWS (USA) FLAT TOP MANHOLE
WITH C.O.B. MODIFICATIONS

CITY ENGINEER
Terry Waldele, P.E.

DATE
6 - 10 - 04

DRAWN BY
JCH - CPD

DRAWING NO.
303